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# THE PUBLIC HEALTH.

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THE public care of health is no longer exclusively the concern of medical men and sanitary officers. The people generally are inquiring into the nature of those sanitary duties by which diseases are prevented and the health of families and communities promoted and protected. This growth of popular knowledge and interest in regard to sanitary duties is awakening just conceptions of responsibility, both in respect of the individual or family, and of the community, city, or State.

To all classes of people, though perhaps first to the municipal and State authorities, there is a practical lesson in the pestilence of yellow-fever now desolating the cities and towns of the Mississippi Valley. The paralysis of commercial interests in that vast region is felt far and wide, while millions of people, who remain unharmed by the epidemic, join with the Boards of Trade and Chambers of Commerce in pouring out abundant sympathy and benefactions for the sufferers. Contributions amounting to a million dollars, with materials for relief of every kind, have thus gone forward. But as soon as the pestilence ceases, and even now, will the people ask, as our best hygienists have for years been urging, with reason, that the epidemic propagation of yellow-fever shall be prevented.

The health of cities and villages is found to be almost equivalent to a public assurance of their prosperity and good repute; and, whenever throughout the domain of a state or a nation the public health is generally good, the people will bravely surmount their common adversities in business or war. The health of the great cities also seems to comprehend in no small degree some of the most important social and political problems of the times; and, as municipal methods of government provide for more

effectual action in matters of sanitary police, as well as for more ample facilities and safeguards for health than can generally be supplied by the operation of sanitary law in hamlets and rural districts, there certainly are, in city life, some important counter-balances in favor of health. Even in London the average health of its more than three and a half millions is higher than in the marshy districts of Bedfordshire, or even in some of the open and prolific regions of East Yorkshire. The art of health in such a great city comprises many things that only the ablest sanitary engineering and supervision can secure. In our populous cities, hygiene and the officers of health prove their life-saving value by most convincing figures. New York, Philadelphia, Boston, Baltimore, and Chicago, already illustrate the fact that, throughout the better portions of the dwelling-areas in our great cities, it is entirely practicable to secure facilities for healthy living which give a lower death-rate in such favored streets or districts than the suburban and rural hamlets suffer. Intelligent people are not slow to interpret such practical advantages of the care and provisions for the public health; hence they are urging the improvement of town-sites, and the introduction of ample supplies of pure water, the planting of parks, and the sewerage of streets.

In each of the great cities just mentioned, the healthy districts overlook other areas which are continually smitten with preventable sickness and mortality, and which are the hot-beds and even the breeding-places of epidemics, that waste the lives of dwellers therein, and seriously menace the inhabitants of neighboring healthful areas. Murray Hill, in the city of New York, is flanked by foul and crowded tenement-houses, and from the City Hall, the Academy of Music, or Stuyvesant Park, it is but a few hundred yards to the tenement rookeries in which constant sickness afflicts from ten to twenty in every hundred, and death takes from forty to sixty in every thousand of the inhabitants during the year. In like manner, in Boston, the mansions of health on Beacon Street look down—toward South Street—upon a dense mass of human wretchedness, in which the sickness and death-rates are enormous. Philadelphia has its “Alaska District,” hard by the old Pennsylvania Hospital; and Baltimore has its Fell’s Point, and “a little local grievance of its

own, called the Basin," the only spots in which yellow-fever ever has gained foothold in that city.

In our principal American cities the people have become sufficiently awakened to personal interests involved in public-health questions to sustain any reasonably good sanitary government. Even the miserable inhabitants of a thousand low cellars, emptied by sanitary orders in the city of New York, begin to imitate Octavia Hill's happy tenants, when they have reached decent quarters under such a gracious landlady as Mrs. Miles, who in this city is pursuing the same plan that Miss Hill adopted; and this practicability of both enforcing and inculcating sanitary duties in the great cities warrants more thorough endeavors for the public as well as proprietary care of the dwellings of the poor than have yet been undertaken. Thoughtful citizens, who consider the real sources of human misery and waste of life in the great cities, invoke the utmost efforts of the sanitary authorities to protect the tenement-classes against the perils of their crowded quarters. The State Board of Health of Massachusetts has exerted its influence in this direction for the benefit of the laboring and poor classes in that State; and in the city of New York the Association for improving the Condition of the Poor, under the leadership of Mr. Howard Potter, has recently taken the field of inquiry, among the twenty thousand tenement-houses, to affirm the advanced positions of philanthropic minds, and to reassure the sanitary and police authorities in the duties which the laws impose on them for the public care of health.

The popular estimation of the importance of health was immensely increased during the late war in this country, and a like result has been witnessed in the European countries which have been testing their martial strength; yet the broader views of the practical importance of health to individuals, to families, and to a nation, must be toned and strengthened by the highest moral considerations. The wasting of human life by preventable disease implies far more important consequences, and quite different results, than those accepted by the Malthusians in their stoical dogmatism. The continued or frequent recurrence of pestilential epidemics, even the excessive death-rates, in any community or country, can properly be taken in evidence of the perilous presence of various conditions, both material and governmental or

social, which tend to the pauperizing, enfeebling, general harm, and decivilization, of the people. The empires of Great Britain and Germany have their chief strength, prosperity, and prospective permanence, in the vigor and soundness of the manhood of their populations; and though the astute Mr. Disraeli, when touching the English pulse on public-health questions, petulantly paraphrased his significant exclamation, "*Sanitas sanitatum, omnia sanitas!*" the feelings of the English people inspired the words of the statesman who has become their Beaconsfield.

The sanitation of great cities had been progressing many years before the general movement for the public care of health throughout the country began. The beneficent results of sanitary improvements under municipal authority have produced strong convictions in the popular mind in favor of extending the sanitary works and methods of cities far into the suburban and rural districts, offering to the entire population of the State the means of protection of the public health. In this view, the public care of health in cities has great importance and responsibility, for it bears the beacon-lights of hygiene to the whole country. Thus far the sanitary departments of municipal governments in America have not been organized upon a sufficiently broad and permanent basis to secure all the benefits sanitary science offers; but, such as they are, the benefits already secured are of inestimable importance, even in New York, where the social and political conditions have been most unfavorable for great gain to the general security of life and health. The evidence of such gain is abundantly exhibited in the last annual report of the Bureau of Vital Statistics of the Health Department in this city.

As the public care of health comprises chiefly those duties and methods of service for the sanitary welfare of the people which, in their individual capacity alone, would not be provided in any adequate manner, the whole subject of sanitary legislation and the sanitation of towns and cities, and of the highways and vehicles of commerce, becomes subordinate to the popular desire and ability to command the interposition and the sanction of obligatory statutes to provide for sanitary works and the skillful supervision of public-health duties. Though it is fortunately true that a great part of the public care of health, even in the enforcement of sanitary regulations and statutes, comprises various

kinds of special instruction to the persons and in the directions to which the requirements of the law are applied, there are numerous public-health duties that, for the welfare of the whole people, must be enforced and complied with in an absolute manner and with unquestioning promptness and obedience; while, on the other hand, there is a domain of personal and domestic hygiene which the statutes do not interfere with, and sanitary inspectors rarely attempt to invade. But it is a noticeable fact in the older historical records of governmental interference for protection against diseases, that the official decisions were more often absurdly empirical and arbitrary than reasonable and useful, and that the interference with persons and domiciles was accompanied with little or no instruction calculated to induce willing compliance with the physiological principles of hygiene. Every good medical officer of the public-health service, at the present day, recognizes the vital necessity of imparting personal instruction concerning all matters of private hygiene and domestic sanitation; while the public obligations for guarding and promoting the public health shall be enforced by the authority of law, as well as inculcated by explanations and arguments.

The authority which ordered and provided for the drainage of the Pontine marshes and enforced a thorough drain-flushing and sewerage for the Roman Coliseum was incapable of any control over merely personal sanitation; but the facilities for hygienic protection were publicly provided and guarded.

As science and social culture advance, the public service of hygiene is invoked more and more, until now there is evinced a general readiness and expectation, amounting to strong desire in many respects, for the interposition and provision by statutes and supervisory officials to secure the perfect cleansing and scavenging of all private premises, the ample conservation and distribution of the purest water, the safest and best means of lighting, the supply of perfect, and only perfect, food-materials, the public restraint of wanton vices, the limitation of child-labor at wages, and the prevention of cruelties and other wrongs to the health of young children, etc., etc. All this is occurring in our day as evidence of an advancing civilization; and perhaps there is nothing stronger and more significant in all this evidence than that the people are endeavoring more and more to avail themselves of such

important means of sanitary improvement and public-health care. Who would have believed, twenty or even fifteen years ago, that the city of New York would have accepted the vigilant system of sanitary supervision which is now enforced under that remarkably effective piece of legislation known as the Metropolitan Health Law; and who would have expected that the States of Massachusetts, Connecticut, Rhode Island, and Michigan, would have organized such efficient State Boards of Health as are now in operation? The popularization of physiological and sanitary knowledge and the inculcation of the duties of private hygiene have kept pace with the works of public sanitation and rendered practicable the operation of sanitary codes and the organization of sanitary duties.

Groaning under burdens of taxation for the support of all sorts of incapables and offenders, the American States were, until recently, following hard after the experiences of European countries; and now, in the great awakening of the people upon the subject of health, in individuals and families, in schools and in workshops, in our public men and in the masses, the first step is being taken toward a decrease in these great burdens—the loathsome dead-wood and sloughs of unhealthy elements of society.

The time seems to have arrived for revising some of the methods of the public care of health, and for extending such care and supervision sufficiently to serve the highest interests of the masses of city populations, and also to insure adequate sanitary protection to the domain of the individual States and of the nation. The first considerations which urge to such organization and enlargement of State and national care of the public health are, the purely material and commonplace requirements of personal and public safety and economy. There is no power or wealth that can safely take the hazards and fatal losses which individuals, communities, and States, incur when an infectious pestilence like yellow-fever or cholera, or a contagious and subtle malady like diphtheria, typhoid fever, or small-pox, invades a people. There is rarely any individual ability even to remove and prevent the miasmata and local sources of the worst of the lingering diseases that afflict hamlets and towns. Unfortunately, as local or town authority is usually organized and administered in the United States, it is poorly adapted—indeed, is hardly adaptable—to exer-

cise the functions of good sanitary government, so far as relates to any trustworthy measures for protecting the public health. This remark does not militate against the policy of local government, but it has reference to the fact that the specific, abundant, and ever-ready knowledge of the causation, habits, records, and course of preventable diseases, and of the best means of controlling and utterly preventing them, and of warding off and stamping out infectious pestilences when they menace any place, is seldom or never at hand in small communities, even in the villages and new cities. Central intelligence and a constantly-replenished source of information and counsel are essential means for securing adequate care of the public health, and such a central service in the State must ere long be regarded as an indispensable part of the government. The State Board of Health is quite an inexpensive body, and its utility is now well tested in fifteen States of the Union. The results, thus far, fully confirm the view we here express. In numerous instances, as in the States of Massachusetts, Michigan, and Wisconsin, the cash-value of the life and sickness-saving benefits to a single group of villages or a city has far exceeded the money expenditures of the State Board of Health for two years. The States of Louisiana and Tennessee failed to confer upon their Central Sanitary Boards any authority adapted to confront and repress the infectious factor of the cause of yellow-fever, or even to cleanse away and extinguish the local factors of the disease. The consequences—calamitous beyond description—cannot be expressed in numbers, nor estimated in millions of money. Unfortunately, the special plenary powers which the States have conferred upon town and parish officials to be exercised in the presence of infectious disease, have been, and most frequently are, so used as most perniciously to augment the popular panic, and increase rather than abate the most essential local causes of an epidemic visitation. The *cordon sanitaire* takes the place of sanitary cleansing and effectual disinfection, while the cordon itself becomes like a rope of sand—a fatal cheat and illusion.

We will not here attempt any discussion of the policy and practices of the quarantine and external sanitary police of maritime and other water-side towns. Municipal and town authorities manage this kind of sanitary service so badly that it will



soon have to be regulated directly under State authority, and upon a basis of national and international laws and sanctions. This subject is barely referred to in passing on to the questions relating to the organization of the public-health service of cities.

The doctrine of local government is probably as well illustrated in the chief cities of the United States as in any country. The last national census found three hundred and eleven cities and large towns which, at that time, had municipal forms of government, and then contained 8,452,315 inhabitants. Fifty of the cities contained 5,784,778 souls, or nearly twenty-two per cent. of the total population of the nation. In all excepting three or four of these cities, and in all the other municipalities and towns, the affairs of public-health care, and the sanitary ordinances and regulations, are found to have arranged themselves in various unsystematic ways, under certain general laws of the State and under an elected commonalty. The sanitary branch of the local government is mostly advisory and menial, the value and dignity of expert hygienic and engineering services being poorly recognized, except in the presence of pestilent epidemics. The writer recalls an instance of recent date, in which he was officially called to a neighboring small city, to determine the nature and source of a fatal filth-disease, which, in a single week, had destroyed thirteen lives, and created such panic that several of the dead lay unwashed and uncoffined for two days; but the municipal health-warden or inspector of the precinct was found to be an illiterate swineherd, who, with undertakers and nurses, had become panic-stricken, though the propagation of the malady was traced readily to a single public well, that received the soakage and outflowings of the unscavengered premises on the slope just back of it. This is one of the countless illustrations of the quality and value of the so-called sanitary branch of the local government in small municipalities and villages. Even in the city of New York, in 1865, just previous to the creation of the Metropolitan Sanitary Board, a health-warden testified, under oath, that hygiene and hygienics were the names of foul odors, and that camphor was the preventive to be employed for protection against small-pox!

The great efforts and personal sacrifices, in labors and tireless argument, by which the reformed sanitary government of this

metropolis was secured, may not be repeated in every city, though the beneficial results already, in twelve years' time, are greater than the founders of this sanitary system promised, and would be esteemed by themselves even far more important than their own lives and fortunes.

Boston, Philadelphia, Baltimore, Cincinnati, Chicago, and the cities of the Mississippi Valley, have made important progress in the administration of an improved sanitary code; but in Boston, only, have the influence and authority of a State Board of Health been so allied with the work and purposes of the municipal sanitary authorities as to expel the nuisances from the populated districts. The new State Boards of Health in Rhode Island, Connecticut, Michigan, Illinois, and Tennessee, will find urgent reasons for imitating the good examples of that in Massachusetts. But it is to the honor of the leading citizens and public hygienists of the cities of Providence, New Haven, New York, Philadelphia, and Chicago, that, without permanent aid from the State authority, the works of sanitary improvement and the organization of skillful methods of public care of health have been well begun. This has been accomplished by the persistent support of sound public hygienists and the educated classes. The particular form of municipal sanitary government best adapted to our American cities may not be determined yet for some time. The municipal charters and codes are still unsettled, and the sanitary service is too frequently the foot-ball of partisan mayors and aldermen. The State Legislatures are disposed to encourage the doctrines of local government, yet partisan legislators studiously devise bad laws for building up partisan local authority. Hence we may reasonably hope for such a wholesome reaction in legislation as has at last given to the English local government scheme something like stability, and a non-partisan quality. The influences which bring about great reforms, and the permanent works of sanitary improvement, are not solely political. Notably this is true in England. Says the registrar-general, in his yearly report for London, dated May, 1878: "Since the cholera epidemic of 1849, the people themselves have become more alive to the necessity of taking an active part in carrying on the great work of town sanitation. Health-officers have been appointed; medical science has been called in, more comprehensive measures have

been adopted in connection with sanitary work, and the improvement that has already taken place in the health of the inhabitants of London indicates the measure of success that has attended these efforts. The soil has been drained, pure water supplied, rookeries that were so injurious to health have been removed, and the dwellings of the poor improved."

London, last year, in its estimated average population of 3,533,484 persons, had the remarkably low death-rate of only 21.9 in the 1,000. Justly may the English sanitarians point to the organized skill and efficiency of the Medical Officers of Health and the Sanitary Engineers of that vast city, and say that, if this is true of London, which has a mean altitude less than forty feet above high-tide mark, and a part of which is upon diked grounds, eleven feet lower than tide-level, then can the entire country be made healthful. This certainly is the conclusion of sanitary science; and, if it is not incorrect, the cities of Memphis, and Vicksburg, and Charleston, and Savannah, as well as New York, Philadelphia, and Chicago, will be made more healthful than the present average of the rural districts.

The means by which the best public care of health interests in our American cities may be attained are not yet established on a trustworthy basis of law. The Metropolitan Health Act of New York yet abides the tests of experience and of the courts; and it has served as a convenient model for recent sanitary legislation, and the organization of local boards of health in nearly a hundred other municipalities. Yet excellent as the provisions of this well-studied law are, the touchstone of their utility is in the faithfulness and competence of the officials who administer them.

The public health depends alike on personal hygiene and public sanitary works and services, and the latter duties are encouraged and cheerfully sustained just in proportion to the progress and enlargement of true physiological knowledge and means of personal and domestic health. Even the judicious and adequate adaptation of public measures for sanitary improvement or for protection against causes of disease, depends on correct knowledge of the laws of life and of the phenomena and facts of the natural world. A great interpreter of the science of physiology and hygiene has remarked that, "if we had a perfect knowledge of the laws of life, and could practically apply

this knowledge in a perfect system of hygienic rules, disease would be impossible ; but at present disease exists in a thousand forms, and the human race languishes, and at times almost perishes, under the grievous yoke. . . . An accurate identification of the diseases is the first necessary step in the investigation of causes ; . . . the causes being investigated, the art of hygiene then comes in to form rules which may prevent the causes, or render the frame fitted to bear them."

In this view of the field of hygienic inquiry and public duty with reference to the care of the sanitary interests of the people, it will justly be asked : "Do our medical officers of health pursue such inquiries ? Do Boards of Health require and maintain these most essential researches into the physiological and phenomenal conditions of health and of the diseases ?" To the credit of the State Boards of Health, and of the recognized leaders of public-health improvements in cities, the fact appears that this class of duties is not wholly neglected. It merits vastly greater attention, however, than it has hitherto received ; for even now, when a terrible pestilence is walking in darkness and wasting at noonday throughout a vast region of our country, exceeding a thousand miles in length, the terror and perils from that epidemic are greatly augmented by the prevailing ignorance of its nature, causes, and laws. The late masterly chief medical officer of health under the Privy Council, Dr. John Simon, of England, advanced into this field of hygienic physiology with great effect, bringing the resources of exact science to the inquiries into the causation and prevention of the infectious fevers and deadly contagia, the course and causes of epidemics, the local causes and factors of pestilential outbreaks, the preventable causes of pulmonary tuberculosis, cancer, and diphtheria. The practical results of such investigations are of vital importance to public hygiene as well as to the art of personal health. All our researches lead to the conclusion, happily expressed by the most learned of hygienists, Dr. William Farr, of England : "The great source of the misery of mankind is not their numbers, but imperfections and the want of control over the conditions in which they live." Viewing the fields of sanitary investigation and public-health care in the light thus shed upon them by the ablest minds and best experience, the conclusion is that these fields become enlarged and more prolific as they are cultivated ;

and that, as the popular knowledge of the conditions of healthy living and of the prevention of causes of disease becomes extended, the public health will receive greater care and protection by municipal and State provision and the highest resources of science; while hygiene, as at present taught, will become extended, and "the new biology will open fresh fields for research, and shed on them brighter lights." The problems of the public health now require that, by the municipal authority and all available agencies which the people can employ, the filth of towns and cities, and the "filth-diseases" and infections also, shall be controlled and their causes prevented by official supervision and interference; that epidemic and pestilential diseases, and all other causes of preventable sickness and mortality, shall be promptly investigated by expert hygienists under official sanctions; that the causes of mortality shall be accurately certified, after faithful verification, not only in cities, but in all places, and that the records of death shall be made under State authority, and be supplemented with careful sanitary investigations and records of prevailing diseases; that the sanitary protection of schools and public assemblages, of tenement populations and all congregate dwellings, and whatever general hygienic measures are required for the common welfare of the people, shall be under the most competent official supervision; that sanitary surveys, the systematic drainage for health, the supplying of pure water in abundance to cities and villages, the regulation of comprehensive measures of external sanitary police, and quarantine practice, shall receive all necessary aid and facilities by State and national laws—the legislation and practice in these branches of sanitary work and service being based on the fact that the laws of human life and health have no politico-geographical boundaries; and, especially, that sanitary knowledge and all the essential duties of civic and domestic hygiene should be popularly inculcated by all available means.

These are now the most essential points in the problems of public sanitation. In the dwelling, the hamlet, the city, the State, the nation, sanitary improvement depends upon the practical observance of Nature's laws. The protection of public health requires comprehensive and skillful methods of applying them.

ELISHA HARRIS.